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ca minimize their ratio. Such PID control parameters thus determined for different conditions of measurement may be stored in a memory such that, when a condition is specified, PID control parameters corresponding to the specified condition can be retrieved from the memory.

IN THE CLAIMS:

Amend claims 1-7 as follows:

1. (Amended) A furnace-type atomic absorption spectrophotometer comprising:
a tube for heating a sample therein;
monitoring means for monitoring temperature of said tube and outputting a monitored value indicative of the monitored temperature;

ag heating control means for digitally controlling heating current for heating said tube such that said monitored value will approach a specified target temperature value; and

parameter setting means for setting parameters according to conditions of measurement and thereby adjusting a response characteristic of said heating control means when said tube is heated by said heating control means.

2. (Amended) The spectrophotometer of claim 1 wherein said heating control means includes a calculator for digitally obtaining a quantity of a specified operation of said heating control means by a PID control calculation on difference between said monitored value and said target temperature value and said parameter setting means serves to set at least one of parameters for said PID control calculation.

3. (Amended) The spectrophotometer of claim 1 wherein said parameter setting means includes an input device for allowing a user to input therethrough said parameters.

4. (Amended) The spectrophotometer of claim 1 wherein said parameter setting means ~~include~~ includes an input device for allowing a user to input therethrough a condition corresponding to said parameters.

5. (Amended) The spectrophotometer of claim 2 wherein said parameter setting means includes an input device for allowing a user to input therethrough said parameters.

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6. (Amended) The spectrophotometer of claim 2 wherein said parameter setting means includes an input device for allowing a user to input therethrough a condition corresponding to said parameters.

7. (Amended) The spectrophotometer of claim 2 wherein said PID control is carried out with a proportional parameter, an integration parameter and a differential parameter.

Add the following new claims:

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12. A furnace-type atomic absorption spectrophotometer comprising:
a tube for heating a sample therein;
monitoring means for monitoring temperature of said tube and outputting a monitored value indicative of the monitored temperature;
heating control means for digitally controlling heating current for heating said tube such that said monitored value will approach a specified target temperature value; and
parameter setting means for adjusting parameters according to kinds of elements to be detected, said parameters determining a response characteristic of said heating control means when said tube is heated by said heating control means.

13. The spectrometer of claim 12 wherein said response characteristic is an indicial

response characteristic at a time of raising temperature.

2 14. The spectrometer of claim 12 wherein said heating control means includes a calculator for digitally obtaining a quantity of a specified operation of said heating control means by a PID control calculation on difference between said monitored value and said target temperature value and said parameter setting means serves to set at least one of parameters for said PID control calculation.

7 15. The spectrophotometer of claim 14 wherein said PID control is carried out with a proportional parameter, an integration parameter and a differential parameter.

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con 8 16. The spectrophotometer of claim 12 wherein said monitoring means monitors values indicative of the temperature of said tube.

17. The spectrometer of claim 1 wherein said response characteristic is an indicial response characteristic at a time of raising temperature.

REMARKS

Claims 1-17 currently remain in the application. Claims 12-17 are newly added claims. Claims 1-7 are herein amended.

The matter of drawings in Paragraph 1 and the editorial matters in Paragraph 2 of the Official Letter have been addressed to. The matter of claim objections in Paragraph 3 of the Official Letter has also been addressed to.

Claims 1, 2, 4 and 8 were rejected under 35 U.S.C. 102 as being anticipated by Egan. In part in view of this reference, independent claim 1 has been amended in the following two aspects. Firstly, the heating control means is now limited to be for digitally controlling the